

the odor of pine lumber in the extensive lumber yards of B Street N. W. As a consequence a large number of old Norway spruce trees on the Agricultural Grounds have died during the past three years, having been killed by three species of Scolytids—*Ips calligraphus*, *Ips grandicollis*, and *Ips avulsus*, the first attacking the lower trunk, the second the upper portion, and the third the tops and branches. Each species has its usual set of parasitic and predatory enemies, associates, and scavengers, making in all quite an extensive fauna.

A NEW TACHINID PARASITE OF *DIABROTICA VITTATA*.

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One Tachinid parasite of *Diabrotica* has been known to science since 1871, in which year *Celatoria* (*Melanosphora*) *diabrotica* was described by Dr. Henry Shimer.¹ Subsequently the late D. W. Coquillett redescribed this species under other generic and specific names.²

Shimer's brief and characterless description of *diabrotica* together with his placing of the species in the genus *Melanosphora* of the Dexiidae offer an excellent excuse for this redescription and synonymous specific name. Shimer's figure, depicting the wing venation fairly well, affords the one clue which preserves his diagnosis from oblivion.

In his redescription of *C. diabrotica* Mr. Coquillett unfortunately confuses the sexes as he says: "Venter in female normal: in the male, furnished with a large, longitudinally compressed process." As a matter of fact the female is the possessor of this process which is excellently shown in Dr. Marx's drawing accompanying his article. Mr. C. H. T. Townsend has previously commented upon this misinterpretation.³ Mr. Coquillett also describes here for the first time the peculiar spiny puparium which is quite distinctive of this group, for which Mr. Townsend proposes the name *Celatoriinae*.

During the early part of June of the present year a wild cucumber vine on the premises occupied by the author at Hyattsville, Maryland, became heavily infested with the beetle, *Diabrotica vittata* Fabr. While observing the movements of the beetles on June 4, several minute tachinid flies were seen sitting upon the upper sur-

¹ American Naturalist, vol. v, p. 219, 1871.

² *Celatoria crawii*, Insect Life, vol. 11, p. 235, 1890.

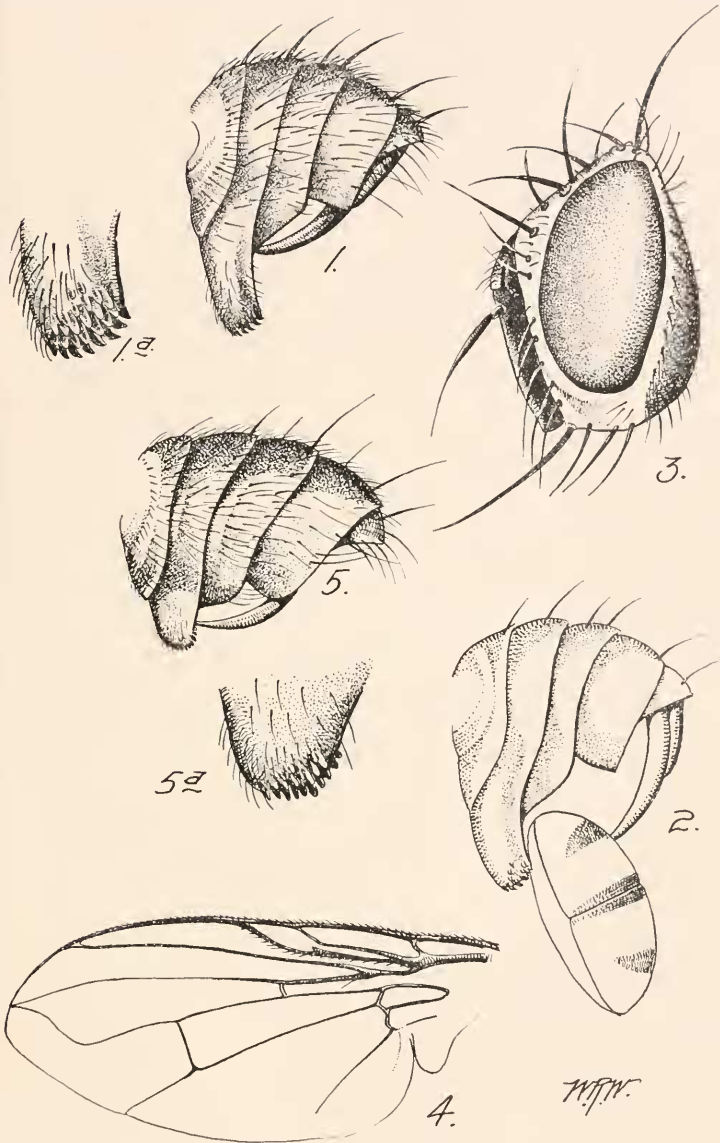
³ Annals Ent. Soc. of Am., vol. 1v, p. 140, June, 1911.

faces of the leaves. Suddenly one of these individuals dashed at a beetle, they grappled, the beetle rolled over upon its back. Then, almost instantly, the fly disengaged herself, resuming the pose upon the leaf, preening her body with the hind legs. The beetle rolled off to the ground and presently flew away. This was observed several times and finally a fly and the beetle attacked were captured for examination. The beetle was found to have a clean hole punched through the center of one elytron. An examination of the abdominal appendages of the fly (plate I, fig. 1) left little doubt as to the origin of this puncture. By referring to the figure it will be seen that the second abdominal segment is immensely prolonged downward into a laterally compressed tubercle, the apex of which is armed with short, flattened, somewhat pointed, spine-like, processes, directed slightly caudad. Opposed to this, with its base attached to apex of the abdomen, is a long curved, strongly chitinized piercer. This is normally held with its tip ensheathed in the posterior edge of the abdominal process described above. In life it is easily visible with the aid of a hand lens. Figure 2 of plate I shows the author's interpretation of the function of these two appendages.

The contact of the fly with the beetle is much too brief and the conflict too strenuous for the eye to observe what actually takes place. But taking into consideration the position of the punctures on the elytra of the beetle and the conformation of the puncturing apparatus, together with the fact that the beetle is turned upon its back during the conflict, this hypothetical figure seems quite plausible.

Several punctured beetles were collected and placed in a breeding jar and on July 10 one fly puparium was found therein. This resembles the puparium of *Celatoria* quite closely in that it is covered with short, spine-like processes. Owing to the writer's prolonged absence from the city, further results of this rearing were lost. But the facts outlined above indicate conclusively the parasitism of this fly on *Diabrotica*.

When first observed it was naturally supposed to be *Celatoria diabrotica* Shimer. In size and general appearance it closely resembles that species but a careful examination revealed important structural differences which make it necessary to propose not only a new species but also to erect a new genus for its reception. This latter action becomes necessary because the first vein is spiny for almost its entire length. It seems quite apparent that this character is wholly artificial, but as it has been utilized extensively as a primary generic and even group character, and is of undoubted convenience in spite of its apparent artificiality, the name *Neocelatoria ferox* n. gen. n. sp. is herewith proposed for this curious fly.



Neocclatoria ferox Walton; 1, Abdomen of female; 1a, Enlarged view of abdominal tubercle; 2, Hypothetical drawing showing probable functioning of appendages; 3, Head of female; 4, Wing.

Celatoria diabrotica Shimer; 5, Abdomen of female; 5a, Abdominal tubercle enlarged.